

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
5 August 2004 (05.08.2004)

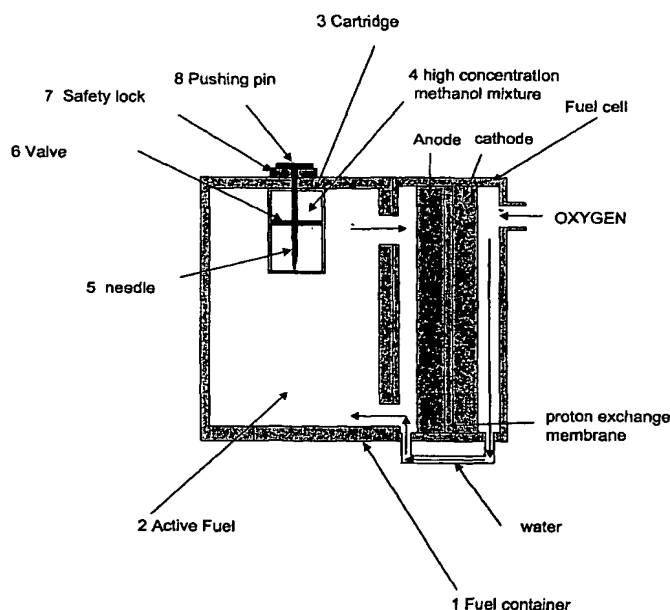
PCT

(10) International Publication Number
WO 2004/066468 A3

- (51) International Patent Classification⁷: **H01M 8/02**, 8/04, 8/10, 4/86
- (21) International Application Number: **PCT/US2004/001553**
- (22) International Filing Date: 15 January 2004 (15.01.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/440,657 15 January 2003 (15.01.2003) US
- (71) Applicant (for all designated States except US): **SEN-DYNE CORPORATION** [US/US]; 599 Broadway, 11th Floor, New York, NY 10012 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **OKUTO, Tadashi** [JP/US]; 100 John Street, Apt 2504, New York, NY 10038 (US). **MILIOS, Ioannis** [US/US]; 140 Franklin St., Apt 6A, New York, NY 10013 (US).
- (74) Agent: **OPPEDAHL, Carl**; Oppedahl & Larson LLP, P.O. Box 5068, Dillon, CO 80435-5068 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: FUEL SUPPLY METHOD FOR DIRECT METHANOL FUEL CELL



(57) Abstract: In a direct methanol fuel cell, fuel efficiency is maintained by periodically adding a higher methanol concentration mixture through a cartridge (3) into the primary fuel container (1). The cartridge (3) replenishes methanol and partial water losses due to the consumption of fuel in the power generating process. In a typical system, the fuel replenishment mechanism is controlled through an electronic apparatus that monitors the power conversion process and is capable of predicting remaining operating capacity.



(88) Date of publication of the international search report:
3 February 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.